

CLAIM LISTING

1. (previously presented) A method for maintaining SIP contact addresses, the method comprising:
 - sending, by a SIP proxy user agent (UA), a first registration message for a remote unit to a SIP registrar;
 - sending a second registration message for the remote unit to the SIP registrar;
 - receiving, in response to the second registration message, a response that indicates a contact address more recent than any provided by the SIP proxy UA; and
 - sending, in response to the received response, a deregistration message for the remote unit to the SIP registrar.
2. (original) The method of claim 1 further comprising receiving, by the SIP proxy UA, a non-SIP registration request from the remote unit prior to sending the first registration message.
3. (original) The method of claim 1 wherein the second registration message is sent in response to a registration timer expiration.
4. (original) The method of claim 1 wherein the first registration message comprises a SIP REGISTER message.
5. (original) The method of claim 4 wherein the SIP REGISTER message indicates that it comprises a new contact address.
6. (original) The method of claim 1 wherein the second registration message comprises a SIP REGISTER message.

7. (original) The method of claim 1 wherein the response that indicates a contact address more recent than any provided by the SIP proxy UA comprises a SIP 200 OK message and at least one creation time stamp.
8. (original) The method of claim 7 wherein the response further comprises a group of contact addresses and a creation time stamp for each.
9. (original) The method of claim 1 wherein the deregistration message comprises a SIP REGISTER message with an Expires header value of "0".

10. (previously presented) A method for maintaining SIP contact addresses, the method comprising:

receiving a first registration message for a remote unit from a first SIP proxy user agent (UA);

storing, as a member of a group of contact addresses for the remote unit, both a first contact address based on the first registration message and a first creation timestamp for the first contact address;

receiving a second registration message for the remote unit from a second SIP proxy UA after receiving the first registration message;

storing, as a member of the group of contact addresses for the remote unit, both a second contact address for the remote unit and a second creation timestamp for the second contact address;

receiving a third registration message for the remote unit from the first SIP proxy UA;

sending, in response to the third registration message, a response that indicates a contact address more recent than any provided by the first SIP proxy UA;

receiving a deregistration message for the remote unit from the first SIP proxy UA; and

removing, from the group of contact addresses for the remote unit, the first contact address.

11. (original) The method of claim 10 wherein the response that indicates a contact address more recent than any provided by the first SIP proxy UA comprises a SIP 200 OK message and at least one creation time stamp.

12. (original) The method of claim 11 wherein the response further comprises a group of contact addresses and a creation time stamp for each.

13. (original) The method of claim 10 wherein the first registration message comprises a SIP REGISTER message, the second registration message comprises a SIP REGISTER message, and the third registration message comprises a SIP REGISTER message.

14. (original) The method of claim 10 wherein the deregistration message comprises a SIP REGISTER message with an Expires header value of "0".

15. (original) A radio access network (RAN) component comprising:
a wireless network interface; and
a SIP proxy user agent, communicatively coupled to the wireless network interface,
adapted to
 receive a registration request from a remote unit via the wireless network
 interface,
 send a first registration message for the remote unit to a SIP registrar,
 send a second registration message for the remote unit to the SIP registrar,
 receive, in response to the second registration message, a response that
 indicates a contact address more recent than any provided by the SIP proxy UA, and
 send, in response to the received response, a deregistration message for the
 remote unit to the SIP registrar.

16. (original) A SIP registrar comprising:
a SIP location data base; and
a SIP location processor, communicatively coupled to the SIP registration data base, adapted to
receive a first registration message for a remote unit from a first SIP proxy user agent (UA),
store in the SIP location data base, as a member of a group of contact addresses for the remote unit, both a first contact address based on the first registration message and a first creation timestamp for the first contact address,
receiving a second registration message for the remote unit from a second SIP proxy UA after receiving the first registration message,
storing in the SIP location data base, as a member of the group of contact addresses for the remote unit, both a second contact address for the remote unit and a second creation timestamp for the second contact address,
receiving a third registration message for the remote unit from the first SIP proxy UA,
sending, in response to the third registration message, a response that indicates a contact address more recent than any provided by the first SIP proxy UA,
receiving a deregistration message for the remote unit from the first SIP proxy UA, and
removing, from the group of contact addresses for the remote unit, the first contact address.